west virginia department of environmental protection

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475 • Fax: (304) 926-0479

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	G10-D047G		
Plant ID No.:	005-00075		
Applicant:	Raven Crest Contracting, LLC		
Facility Name:	Bull Creek Preparation Plant Facility		
Location:	Ashford, Boone County, WV		
SIC Codes:	1221 (Bituminous Coal & Lignite - Surface) 1222 (Bituminous Coal & Lignite - Underground)		
NAICS Codes:	212111 (Bituminous Coal and Lignite Surface Mining) 212112 (Bituminous Coal Underground Mining)		
Application Type:	Modification		
Received Date:	October 11, 2016		
Engineer Assigned:	Dan Roberts		
Fee Amount:	$1,500		
Date Received:	October 12, 2016		
Applicant's Ad Date:	November 2, 2016		
Newspaper:	*Coal Valley News*		
Complete Date:	November 15, 2016		
UTM Coordinates:	Easting: 438.83 km	Northing: 4228.36 km	NAD 83 Zone 17N
Lat/Lon Coordinates:	Latitude: 38.201113	Longitude: -81.698626	NAD83
Description:	Modification to add one refuse filter belt conveyor BC-10 and change the control device for raw coal screen SS-01 and transfer points TP-04 and TP-05 from FW (full enclosure with water sprays) to PW (partial enclosure with water sprays).		

BACKGROUND

Raven Crest Contracting, LLC owns and/or operates the existing Bull Creek Preparation Plant Facility and leases the property from Penn Virginia. The facility is currently operating under registration G10-D047F which was approved on January 29, 2015.

DESCRIPTION OF PROCESS

The Bull Creek Preparation Plant Facility is located in a remote area of Ashford, Boone County, WV.

Raw coal will be delivered by truck to open stockpile OS-01(SW-WS) @ TP-01(UL-MDH); transfer by front-end loader to bin BS-01(PW) @ TP-02(UD-PW); to belt BC-01(PE) @ TP-03(TC-FE); and to screen SS-01(PW) @ TP-04(TC-PW). Coal from screen SS-01 can discharge directly to belt BC-02(PE) @ TP-05(TC-PW) or transfer to crusher CR-01(FW) @ TP-06(TC-FW). Belt BC-02 @ TP-07(TC-FW) transfers material to the plant and thru raw coal screen SS-02(FW) @ TP-08(TC-FW) for the wet wash @ TP-09(TC-FW).

NOTE: Bin BS-01 has not been constructed at this time - the front-end loader is transferring to a feeder with water which transfers to belt BC-01.

Plant clean coal will transfer from the plant @ TP-10(TC-FW) onto belt BC-03(PE) and to stockpile OS-02(SW-WS) @ TP-11(TC-MDH).

Direct ship clean coal will be delivered to a three-sided truck dump bin BS-02(PW) @ TP-12(UD-PW); go to belt BC-04(PE) @ TP-13(TC-FE); and to screen SS-03(FW) @ TP-14(TC-FW). Screened coal can either go directly to belt BC-05(PE) @ TP-15(TC-FW) or transfer to crusher CR-02(FW) @ TP-16(TC-FW); and then to belt BC-05 @ TP-17(TC-FW). Belt conveyors BC-05 and BC-06(PE) will transfer the material to open stockpile OS-02(SW-WS) @ TP-18(TC-FE) and TP-19(TC-MDH). Belt conveyor BC-07(PE) will reclaim clean coal from stockpile OS-02 @ TP-20(LO-UC); transfer to belt conveyor BC-08(PE) @ TP-21(TC-FE); go thru the rail surge bin BS-03(FE) and the loadout weigh bin BS-04(FE) to railcar @ TP-22(TC-FE), TP-23(TC-FE) and TP-24(LR-TC).

Plant refuse will exit the plant on belt conveyor BC-09(PE) @ TP-25(TC-FW); to refuse bin BS-05(FE) @ TP-26(TC-FE); to truck @ TP-27(LO-MDH); and to the disposal area @ TP-28(UL-MDH).

New refuse filter press belt conveyor BC-10 (NC) will exit the plant @ TP-29(TC-FW) and transfer to the existing refuse belt conveyor BC-09 @ TP-30(TC-PE).

There are no VOC's or HAP's associated with this facility.

The facility shall be modified and operated in accordance with the following equipment and control device information taken from registration applications G10-D047G, G10-D047F, G10-D047E, G10-C047D, G10-C047C, G10C-047B, G10-B047A and G10-B047 and any amendments thereto:

Equipment ID No.	Date of Construction, Reconstruction or Modification [1]	G10-D Applicable Sections [2]	Description	Maximum Capacity		Control Device [3]	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID. No.	Control Device [3]
Raw Coal Circuit									
OS-01	C 2013	5 and 8	Raw Coal Stockpile - maximum 100,000 tons capacity, 188,869 ft² base area and 75' height - receives raw coal from trucks, stores it and then a front-end loader transfers it to BS-01	300	2,628,000	SW-WS	B A	TP-01 TP-02	UL-MDH UD-PW
BS-01	C 2013	5 and 8	Raw Coal Bin - 80 tons capacity - receives raw coal from OS-01 via a front-end loader and then feeds it onto BC-01	300	2,628,000	PW	B A	TP-02 TP-03	UD-PW TC-FE
BC-01	C 2013	5 and 8	42" Belt Conveyor - receives raw coal from BS-01 and transfers it to SS-01	300	2,628,000	PE	B A	TP-03 TP-04	TC-FE TC-PW
SS-01	C 2013	5 and 8	Raw Coal Double Deck Screen - receives raw coal from BC-01, sizes it and then the oversize raw coal drops into CR-01 while the sized raw coal drops onto BC-02	300	2,628,000	PW	B A A	TP-04 TP-06 TP-05	TC-PW TC-FW TC-PW
CR-01	C 2013	5 and 8	Hammermill Double Roll Crusher - receives oversize raw coal from SS-01, crushes it and then drops it onto BC-02	300	2,628,000	FW	B A	TP-06 TP-07	TC-FW TC-FW
BC-02	C 2013	5 and 8	Belt Conveyor - receives sized raw coal from SS-01 and CR-01 and transfers it to SS-02	300	2,628,000	PE	B B A	TP-05 TP-07 TP-08	TC-PW TC-FW TC-FW
SS-02	C 2013	5 and 8	8x16 Double Deck Screen - receives sized raw coal from BC-02, sizes it and then transfers it to the wet wash system	300	2,628,000	FW	B A	TP-08 TP-09	TC-FW TC-FW
Direct Ship Coal Circuit									
BS-02	M 2013 C 2003	5 and 8	Direct Ship Coal Truck Dump Bin - 150 tons capacity - receives direct ship coal from trucks and then feeds it onto BC-04	500	4,380,000	PW	B A	TP-12 TP-13	UD-PW TC-FW
BC-04	M 2013 C 2003	5 and 8	36" Belt Conveyor - receives direct ship coal from BS-02 and transfers it to SS-03	500	4,380,000	PE	B A	TP-13 TP-14	TC-FW TC-FW
SS-03	M 2013 C 2003	5 and 8	Direct Ship Coal Double Deck Screen - receives direct ship coal from BC-04, sizes it and then the oversize direct ship coal drops into CR-02 while the sized direct ship coal drops onto BC-05	500	4,380,000	FW	B A A	TP-14 TP-16 TP-15	TC-FW TC-FW TC-FW
CR-02	M 2013 M 2011 C 2005	5 and 8	Hammermill Double Roll Crusher - receives oversize direct ship coal from SS-03, crushes it and then drops it onto BC-05	500	4,380,000	FW	B A	TP-16 TP-17	TC-FW TC-FW
BC-05	M 2013 C 2003	5 and 8	42" Belt Conveyor - receives sized direct ship coal from SS-03 and CR-02 and transfers it to BC-06	500	4,380,000	PE	B A	TP-17 TP-18	TC-FW TC-FE
BC-06	M 2013 C 2003	5 and 8	42" Belt Conveyor - receives sized direct ship coal from BC-05 and transfers it to OS-02 (see Clean/Direct Ship Coal Loadout Circuit below)	500	4,380,000	PE	B A	TP-18 TP-19	TC-FE TC-MDH
Clean/Stoker Coal Loadout Circuit									
BC-03	C 2013	5 and 8	36" Plant Clean Coal Conveyor - receives clean coal from the wet wash system and transfers it to OS-02	200	1,752,000	PE	B A	TP-10 TP-11	TC-FW TC-MDH
OS-02	M 2013 M 2011 C 2003	5 and 8	Clean Coal Stockpile - maximum 100,000 tons capacity, 188,869 ft² base area and 75' height - receives clean coal from BC-03 and direct ship coal from BC-06 (see Direct Ship Coal Circuit above), stores it and then it is reclaimed by underground feeders onto BC-07	----	6,132,000	SW-WS	B B A	TP-11 TP-19 TP-20	TC-MDH TC-MDH LO-UC
BC-07	M 2013 C 2007	5 and 8	72" Belt Conveyor - receives clean/direct ship coal from OS-02 via underground feeders and transfers it to BC-08	3,500	6,132,000	PE	B A	TP-20 TP-21	LO-UC TC-FE
BC-08	M 2013 C 2007	5 and 8	72" Belt Conveyor - receives clean/direct ship coal from BC-07 and transfers it to BS-03	3,500	6,132,000	PE	B A	TP-21 TP-22	TC-FE TC-FE
BS-03	M 2013 M 2011 C 2007	5 and 8	Surge Bin - 240 tons capacity - receives clean/direct ship coal from BC-08 and then feeds it into BS-04	3,500	6,132,000	FE	B A	TP-22 TP-23	TC-FE TC-FE
BS-04	M 2013 M 2011 C 2007	5 and 8	Loadout Bin - 120 tons capacity - receives clean/direct ship coal from BS-03 and loads it into railcars through a telescopic chute	3,500	6,132,000	FE	B A	TP-23 TP-24	TC-FE LR-TC
Refuse Circuit									
BC-10	C 2016	5 and 8	Filter Press Refuse Belt Conveyor - receives refuse from the wet wash system and transfers it onto BC-09	100	876,000	N	B A	TP-29 TP-30	TC-FW TC-FE

Equip-ment ID No.	Date of Construction, Reconstruction or Modification [1]	G10-D Applicable Sections [2]	Description	Maximum Capacity		Control Device [3]	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID. No.	Control Device [3]
BC-09	C 2013	5 and 8	36" Belt Conveyor - receives refuse from the wet wash system and BC-10 and transfers it to BS-05	200	1,752,000	PE	B B A	TP-25 TP-30 TP-26	TC-FW TC-FE TC-FE
BS-05	C 2013	5 and 8	Refuse Bin - 200 tons capacity - receives refuse from BC-09 and then loads it into trucks through a fixed chute for delivery to the disposal area	200	1,752,000	FE	B A A	TP-26 TP-27 TP-28	TC-FE LO-MDH UL-MDH

[1] In accordance with 40 CFR 60 Subpart Y, coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems constructed, reconstructed, or modified after April 28, 2008 shall not discharge gases which exhibit 10 percent opacity or greater. For open storage piles constructed, reconstructed, or modified after May 27, 2009, the permittee shall prepare and operate in accordance with a fugitive coal dust emissions control plan that is appropriate for site conditions.

[2] All registered affected facilities under Class II General Permit G10-D are subject to Sections 1.0, 1.1, 2.0, 3.0 and 4.0.

[3] Control Device Abbreviations: FE - Full Enclosure; FW - Full Enclosure with Water Sprays; PE - Partial Enclosure; PW - Partial Enclosure with Water Sprays; WS - Water Sprays; WW - wet wash circuit; TC - Telescopic Chute; UC - Under-pile Conveyor (full enclosure); MDH - Minimize Drop Height; and N - No Control.

DESCRIPTION OF FUGITIVE EMISSIONS (taken directly from the application)

Potential sources of fugitive particulate emissions for this facility include emissions, which are not captured by pollution control equipment and emissions from open stockpiles and vehicular traffic on unpaved haulroads and work areas. The haulroads and work areas will be controlled by water truck in accordance with section E.6.c.i. of the General Permit.

The water truck is equipped with pumps sufficient to maintain haulroads and work areas. The water truck will be operated three times daily, and more as needed in dry periods.

An additive to prevent freezing will be utilized in the winter months when freezing conditions are present.

SITE INSPECTION

Fred Teel of the DAQ's Compliance and Enforcement Section performed a scheduled full on-site targeted inspection on September 6, 2016. Mr. Teel's notes from the inspection were as follows: "Attached is a Method 9 test report from 2014. It does not include the direct ship circuit. The test was completed successfully." The facility was given a status code of 30 - In Compliance.

Directions from Charleston, WV are to take US Route 119 South, turn onto State Route 3 and proceed toward Foster; about 2 miles east of Foster turn onto County Route 1 and travel approximately 7 miles toward Ashford; cross Big Coal River, turn left onto County Route 1/1 and travel approximately 2 miles, turn right onto Bull Creek Road and travel approximately 1.5 miles and the facility will be on the right.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Fugitive emission calculations for continuous and batch drop operations, transfer points, crushing and screening, storage piles, and paved and unpaved haulroads are based on AP-42 Fifth Edition "Compilation of Air Pollution Emission Factors", Volume 1. Control efficiencies were applied based on "Calculation of Particulate Matter Emission - Coal Preparation Plants and Material Handling Operations." The emission factors for crushing/breaking and screening operations were obtained from the Air Pollution Engineering Manual - Air & Waste Management Association - June 1992. The calculations were performed by the applicant's consultant using the DAQ's G10-C Excel Emission Calculation Spreadsheet and were checked for accuracy and completeness by the writer. The writer used the DAQ's G10-C Excel Emission Calculation Spreadsheet to calculate the increase in emissions and a copy has been attached.

The proposed modification will result in an increase in the facility's potential to discharge controlled particulate matter emissions of 3.07 pounds per hour (PPH) and 13.46 tons per year (TPY) of particulate matter (PM), of which 1.45 PPH and 6.33 TPY will be particulate matter less than 10 microns in diameter (PM_{10}). Refer to the following table for a complete summary of the proposed facility's potential to discharge:

- Proposed Increase in Emissions - **Raven Crest Contracting, LLC Bull Creek Preparation Plant**	**Controlled PM Emissions**		**Controlled PM_{10} Emissions**	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	0.00	0.00	0.00	0.00
Unpaved Haulroad Emissions	0.00	0.00	0.00	0.00
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	*0.00*	*0.00*	*0.00*	*0.00*
Point Source Emissions				
Equipment Emissions	3.00	13.14	1.41	6.18
Transfer Point Emissions	0.07	0.32	0.04	0.15
Point Source Emissions Total (PTE)	*3.07*	*13.46*	*1.45*	*6.33*
INCREASE IN EMISSIONS	**3.07**	**13.46**	**1.45**	**6.33**

The proposed modification will result in a new potential to discharge controlled particulate matter emissions of 109.29 PPH and 468.60 TPY of particulate matter (PM), of which 35.41 PPH and 150.30 TPY will be particulate matter less than 10 microns in diameter (PM_{10}). Refer to the following table for a complete summary of the facility's proposed potential to discharge:

- New Facility-wide Emissions - **Raven Crest Contracting, LLC Bull Creek Preparation Plant**	**Controlled PM Emissions**		**Controlled PM_{10} Emissions**	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	0.48	2.12	0.23	0.99
Unpaved Haulroad Emissions	88.26	386.63	25.51	111.74
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	*88.74*	*388.75*	*25.74*	*112.73*
Point Source Emissions				
Equipment Emissions	15.60	68.33	7.33	32.11
Transfer Point Emissions	4.95	11.52	2.34	5.45
Point Source Emissions Total (PTE)	*20.55*	*79.85*	*9.67*	*37.56*
FACILITY EMISSIONS TOTAL	**109.29**	**468.60**	**35.41**	**150.30**

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the modified facility. The proposed modification of Raven Crest Contracting, LLC's existing wet wash coal preparation plant is subject to the following state and federal rules:

45CSR5 *To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas*

The facility is subject to the requirements of 45CSR5 because it meets the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed are in operation.

45CSR13 *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation*

The proposed modification is subject to the requirements of 45CSR13 because it will involve the construction of one belt conveyor and modification of an existing screen, which are defined as an affected facilities in 40 CFR 60 Subpart Y. The applicant has submitted an application for a registration to modify. The applicant published a Class I legal advertisement in the *Coal Valley News* on November 2, 2016 and submitted the $500 application fee and $1,000 application fee.

45CSR16 *Standards of Performance for New Stationary Sources*
40 CFR 60 *Subpart Y: Standards of Performance for Coal Preparation and Processing Plants*

This facility is subject to 40 CFR 60 Subpart Y because it was constructed and modified after October 24, 1974 and processes more than 200 tons of coal per day. The proposed modification includes the construction of one belt conveyor and modification of an existing screen, which are defined as affected facilities in 40 CFR 60 Subpart Y. Therefore, the proposed modification is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation Plants. The facility should be in compliance with Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal which was constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation.

The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. The plan must be submitted to the Director prior to startup of the new, reconstructed or modified open storage pile.

45CSR30 *Requirements for Operating Permits*

In accordance with 45CSR30 Major Source Determination, the facility is *not* listed in 45CSR30 subsection 2.26.b as one of the categories of stationary sources which must include fugitive emissions (coal open storage piles constructed or modified on or before May 27, 2009 and haulroads) when determining whether it is a major stationary source for the purposes of § 302(j) of the Clean Air Act. The facility's potential to emit will be 38.55 TPY for PM_{10} (coal open storage piles constructed or modified after May 27, 2009 and point sources combined), which is less than the 45CSR30 threshold of 100 TPY of a regulated air pollutant used to define a major stationary source. Therefore, the facility remains a nonmajor source subject to 45CSR30. The facility is not subject to the permitting requirements of 45CSR30 and is classified as a deferred source.

The proposed modification of Raven Crest Contracting, LLC's wet wash coal preparation plant is <u>not</u> subject to the following state and federal rules:

45CSR14 *Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration*

In accordance with 45CSR14 Major Source Determination, the facility is *not* one of the 100 TPY stationary sources listed under the definition of "Major Stationary Source" in subsection 2.43.a. Therefore, it must have the potential to emit 250 TPY or more of any regulated pollutant to meet the definition of a major source in subsection 2.43.b. At the end of

subsection 2.4.3, this facility is not listed in Table 1 - Source Categories Which Must Include Fugitive Emissions. So, fugitive emissions (from coal open storage piles constructed or modified on or before May 27, 2009 and haulroads) are not included when determining major stationary source applicability. The facility's potential to emit will be 81.97 TPY for PM (coal open storage piles constructed or modified after May 27, 2009 and point sources combined), which is less than the 45CSR14 threshold of 250 TPY for a regulated air pollutant used to define a major stationary source. Therefore, the proposed modification is not subject to the requirements set forth within 45CSR14.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

A toxicity analysis was not performed because the primary pollutants that will be emitted from this facility are PM (particulate matter) and PM_{10} (particulate matter less than 10 microns in diameter), which are non-toxic pollutants.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed due to the size and location of this facility and the extent of the proposed modification. This facility is located in Boone County, WV, which is currently designated as being in attainment for PM (particulate matter) and PM_{10} (particulate matter less than 10 microns in diameter). This modified facility will remain a minor source as defined by 45CSR14, therefore, an air quality impact analysis is not required.

GENERAL PERMIT ELIGIBILITY

The proposed modification of this facility meets the applicability criteria (Section 2.3), siting criteria (Section 3.1) and limitations and standards (Section 5.1) as specified in General Permit G10-D.

All registered facilities under Class II General Permit G10-D are subject to Sections 1.0, 1.1, 2.0, 3.0 and 4.0.

MONITORING OF OPERATIONS

The coal processing and conveying equipment and storage areas should be observed to make sure that the facility is meeting the applicable visible emission standards of 40 CFR 60, Subpart Y. Visible emissions from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008 shall not exceed 10 percent (10%) opacity as stated in 40 CFR 60.254(b). Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the maximum 10% opacity limitation.

The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. The plan must be submitted to the Director prior to startup of the new, reconstructed or modified open storage pile.

RECOMMENDATION TO DIRECTOR

The information contained in this modification application to a General Permit registration indicates that compliance with all applicable regulations should be achieved when all of the proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area should be minimized. No comments were received during the comment period. Therefore, the granting of a General Permit G10-D registration to Raven Crest Contracting, LLC for the modification of their existing wet wash coal preparation plant located near Ashford, Boone County, WV is hereby recommended.

Daniel P. Roberts, Engineer Trainee
NSR Permitting Section

November 15, 2016
Date

Increase In Emissions DPR

EMISSIONS SUMMARY

Name of applicant: Raven Crest Contracting
Name of plant: Bull Creek PP-G10-D047G

Particulate Matter or PM (for 45CSR14 Major Source Determination)

	Uncontrolled PM		Controlled PM	
	lb/hr	TPY	lb/hr	TPY
FUGITIVE EMISSIONS				
Stockpile Emissions	0.00	0.00	0.00	0.00
Unpaved Haulroad Emissions	0.00	0.00	0.00	0.00
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	**0.00**	**0.00**	**0.00**	**0.00**
POINT SOURCE EMISSIONS				
Equipment Emissions	0.00	0.00	3.00	13.14
Transfer Point Emissions	0.04	0.19	0.07	0.32
Point Source Emissions Total*	**0.04**	**0.19**	**3.07**	**13.46**
Facility Emissions Total	**0.04**	**0.19**	**3.07**	**13.46**

*Note: Point Source Total Controlled PM TPY emissions is used for 45CSR14 Major Source determination (see below)

***Facility Potential to Emit (PTE) (Baseline Emissions) = 13.46**

(Based on Point Source Total controlled PM TPY emissions from above) ENTER ON LINE 26 OF APPLICATION

Particulate Matter under 10 microns, or PM-10 (for 45CSR30 Major Source Determination)

	Uncontrolled PM-10		Controlled PM-10	
	lb/hr	TPY	lb/hr	TPY
FUGITIVE EMISSIONS				
Stockpile Emissions	0.00	0.00	0.00	0.00
Unpaved Haulroad Emissions	0.00	0.00	0.00	0.00
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	**0.00**	**0.00**	**0.00**	**0.00**
POINT SOURCE EMISSIONS				
Equipment Emissions	0.00	0.00	1.41	6.18
Transfer Point Emissions	0.02	0.09	0.04	0.15
Point Source Emissions Total*	**0.02**	**0.09**	**1.45**	**6.33**
Facility Emissions Total	**0.02**	**0.09**	**1.45**	**6.33**

*Note: Point Source Total Controlled PM-10 TPY emissions is used for 45CSR30 Major Source determination

INPUTS

Include all information for each emission source and transfer point as listed in the permit application.

Name of applicant: Raven Crest Contracting
Name of plant: Bull Creek PP-G10-D047G
Increase in Emissions - 11/2/16

1. CRUSHING AND SCREENING (including all primary and secondary crushers and screens)

1a. PRIMARY CRUSHING

Primary Crusher ID Number	Description	Maximum Material Processing Capacity TPH	Maximum Material Processing Capacity TPY	Control Device ID Number	Control Efficiency %

1b. SECONDARY AND TERTIARY CRUSHING

Secondary & Tertiary Crusher ID	Description	Maximum Material Processing Capacity TPH	Maximum Material Processing Capacity TPY	Control Device ID Number	Control Efficiency %

1c. SCREENING

Secondary & Tertiary Crusher ID	Description	Maximum Material Processing Capacity TPH	Maximum Material Processing Capacity TPY	Control Device ID Number	Control Efficiency %
	BEFORE CHANGES				
SS-01	DD Screen	-300	-2,628,000	FW	90
	AFTER CHANGES				
SS-01	DD Screen	300	2,628,000	PW	80

2. TRANSFER POINTS (including all conveyor transfer points, equipment transfer points etc.)

		PM	PM-10
k =	Particle Size Multiplier (dimensionless)	0.74	0.35
U =	Mean Wind Speed (mph)	7	

Transfer Point ID No.	Transfer Point Description Include ID Numbers of all conveyors, crushers, screens, stockpiles, etc. involved	Material Moisture Content %	Maximum Transfer Rate TPH	Maximum Transfer Rate TPY	Control Device ID Number	Control Efficiency %
	BEFORE CHANGES					
TP-04	*BC-01 to SS-01*	*5*	*(300)*	*(2,628,000)*	*FW*	*90*
TP-05	*SS-01 to BC-02*	*5*	*(300)*	*(2,628,000)*	*FW*	*90*
	AFTER CHANGES					
TP-04	BC-01 to SS-01	5	300	2,628,000	PW	80
TP-05	SS-01 to BC-02	5	300	2,628,000	PW	80
	NEW TRANSFER POINTS					
TP-29	Plant to BC-10	15	100	876,000	TC-FW	90
TP-30	BC-10 to BC-09	15	100	876,000	TC-PE	50

3. WIND EROSION OF STOCKPILES *(including all stockpiles of raw coal, clean coal, coal refuse, etc.)*

p =	number of days per year with precipitation >0.01 inch	157
f =	percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height	20

Source ID No.	Stockpile Description	Silt Content of Material %	Stockpile base area Max. sqft	Control Device ID Number	Control Efficiency %

4. UNPAVED HAULROADS *(including all equipment traffic involved in process, haul trucks, endloaders, etc.)*

s =	silt content of road surface material (%)	9
p =	number of days per year with precipitation >0.01 inch	157
M_{dry} =	surface material moisture content (%) - dry conditions	0.2

Item Number	Description	Number of wheels	Mean Vehicle Weight(tons)	Mean Vehicle Speed (mph)	Miles per Trip	Maximum Trips Per Hour	Maximum Trips Per Year	Control Device ID Number	Control Efficiency %
1									
2									
3									
4									
5									
6									
7									
8									

5. INDUSTRIAL PAVED HAULROADS *(including all equipment traffic involved in process, haul trucks, endloaders, etc.)*

sL =	road surface silt loading, (g/ft^2)	1
P =	number of days per year with precipitation >0.01 inch	157

Item Number	Description	Mean Vehicle Weight (tons)	Miles per Trip	Maximum Trips Per Hour	Maximum Trips Per Year	Control Device ID Number	Control Efficiency %
1							
2							
3							
4							
5							
6							
7							
8							